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EVALUATION OF STPA AND FUTURE WORK PROGRAMME

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I. INTRODUCTION

1. It should be recalled that the Statistical Training Programme for Africa (STPA) was adopted by the Tenth Session of the Conference of African Statisticians held in 1977 and was formally instituted by Resolution 9 ECO (XVIII) of the Eighteenth Session of the ECA Executive Committee held at Khartoum (Sudan) in 1978.

2. The establishment of this programme was chiefly motivated by the fact that the situation of most of the national African Statistics Departments as far as their staff were concerned still left much to be desired although the statistical training programme launched after 1960 adequately covered the objectives. In fact, the departments had gradually lost many qualified staff who drifted to other departments of the state, parastatal and private sectors and even to other more developed countries.

3. Another reason that motivated the establishment of STPA was the under-utilisation of the existing training facilities due to lack of information on the courses offered, the conditions for admission and available finances.

4. Finally, the last reason was that most of the training courses, particularly those offered by universities, tend to be too academic.

5. For all these reasons, the ninth session of the Conference of African Statisticians held in Lome, Togo, in 1975 insisted on the establishment of a long-term programme for the training of African statisticians and the scrutiny of all financing possibilities so as to ensure the continuity of the programme. As recommended by the Conference, a working group met in August 1977 to consider Africa's statistical training needs. Special attention was given to the following matters:

(a) improvement of the existing training centres and how these centres could as far as possible be effectively utilised, whether they are regional or national, and the practical re-orientation of their teaching programmes;

(b) reduction in the loss of qualified staff working in the national statistics departments;

(c) financial resources required; and

(d) co-ordination of the statistical training activities in and outside the region.

6. The present evaluation of the STPA was requested at the third meeting of the Directors of the centres participating in the programme, held in Addis Ababa in November, 1983. The need to compare the results so far achieved with the initial objectives of the programme was emphasized. Here it is a question of conducting an internal evaluation of the STPA programme as a whole and not only the regional component of the programme financed by the United Nations Development Programme (UNDP).

7. The present evaluation covers the following topics:

- Objectives of the STPA at the time it was established;
- Evaluation of the performance of the STPA centres;
- Justifications of the results achieved and follow-up action to be taken;
- Evaluation of the activities undertaken within the framework of the programme;
- Conclusions and future work programme.

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II. OBJECTIVES OF STPA

8. The main objective of the STPA is to ensure that the African region has permanent supply of qualified statistical staff for the statistics departments and other State departments as well as for the private sector. It is therefore necessary to take into consideration each country's global needs in statistical staff and to ensure that the private and the public sectors have a reasonable share of the trained personnel.

9. Transfers to other posts of the public or private sectors within the same country do not constitute a loss for this country, nevertheless efforts should be made to equip statistics departments with sufficient number of specialists so that they can discharge their duties of collecting, processing and analysing the data required for economic and social development.

10. To enable STPA attain its objective, it was originally concerned as a ten-year programme aiming at ensuring Africa's self sufficiency by:

- increasing the number of trained statisticians;
- improving and maintaining the quality of the serving statistical staff.

11. It was thought that during the period 1978-87 (and probably on a permanent basis thereafter), it should be necessary that the STPA centres increase their output almost by half. The most important part of the increase concerned professional training courses in the English-speaking countries. However, it should also be necessary to take steps to increase the facilities for the training of statistician-economists (ISE) for the French-speaking countries and implement a special project for the Portuguese-speaking African countries.

12. To this end, assistance should be given to the centres participating in the programme so as to:

- improve their efficiency and output;
- re-orient their teaching programmes with a view to making them more practical while at the same time maintaining a good training level; and
- ensure that they become self-sufficient.

13. It was decided that STPA would offer training in the following areas:

(a) Professional training

This involves a general basic university training leading to one of the following degrees: "ingénieur des travaux statistiques (ITS), ingénieur d'application de la statistique (IAS), First degree in Statistics (B.A., B.Sc., B.Stat.) or equivalent qualifications. Top priority was given to this area of training.

(b) Specialized training and post-graduate studies

The aim here is to intensify training at the post-graduate level as to make the region less dependent on foreign institutions and personnel. Three areas of training fall within this category:

- long period of studies leading to one of the following degrees: statistician-economist degree, Masters or Doctorate in statistics or equivalent qualifications;

- specialization particularly in the following fields: national accounting, agricultural statistics, sample surveys, demographic statistics, manpower and employment statistics and electronic data processing;

- short-term courses and seminars organized by centres in the region or offered by external institutions for working statisticians.

(c) Training of middle level statisticians

It was proposed that at this level, training should normally be done at the level of the countries. As and when the professional statisticians become many, this form of training should be integrated into the programme of the national statistics departments. However, the existing regional training facilities should be maintained, even strengthened if need be. Studies in this category would lead to either "diplome d'adjoint technique de la statistique", or diploma in statistics (intermediate level) or "diplome d'agent technique de la statistique", or certificate in statistics (middle level).

14. Besides, it was proposed that STPA should serve as the framework for the co-ordination of the establishment, improvement and, if need be, the expansion of the training facilities in Africa. Its work programme should cover the following areas:

(i) dissemination of information on training activities;

(ii) maintenance of equivalence of curricula and qualifications;

(iii) review and re-orientation of the study programmes to ensure a more practical training and supplement the general training courses through the provision of specialized training;

(iv) development of additional projects and expansion of existing projects for professional training, including post-graduate training;

(v) specialized training: centres participating in STPA should be encouraged to make provisions for specialization; specialized training courses organized by centres outside the region (such as the Munich Centre for Advanced Training in Applied Statistics) should be considered as forming an integral part of STPA;

(vi) assistance to countries desiring to draw up middle level in-service training programmes, especially drawing up of projects, course content or provision of documentation for the courses;

(vii) organization of short-term courses and seminars for working statisticians;

(viii) training of trainers;

(ix) teaching of statistics in secondary schools;

(x) periodical critical analysis and evaluation of STPA;

(xi) effective co-ordination of the activities of STPA by ECA, especially, through the biennal meeting of the Directors of the training centres in and outside the region and the Joint Conference of African Planners, Statisticians and Demographers.

15. Fifteen regional or national centres offering regional services currently participate in the programme. Besides, five institutions situated outside Africa are associate members of STPA. The list of these centres and institutions are attached hereto as annex I. It should be noted that at its inception, STPA had twelve members and only one associate member.

III. EVALUATION OF THE PERFORMANCE OF THE STPA CENTRES

16. The number of professional statisticians working in 1977 was estimated at 1482. Therefore 5,045 more should be trained during the period between 1978 and 1987. Similarly, according to the estimates, the number of the middle level statisticians stood at 2,979. Therefore, 6,482 more should be trained during the same period.

17. Table I shows the development of the situation concerning the actual number of statistical staff at post between 1977 and 1982 in respect of 33 African countries.

Table I. Comparison of the number of statistical staff in post in 1977 and 1982

Field of study and category of statistical staff	Statistical staff in post			Estimated needs 1978-82	Percentage of needs met
	1977	1982	Increase		
English-speaking African countries (18 countries)1/					
- Professional categories	611	1,301	690	1,146	60
- Middle level categories	1,280	2,455	1,175	1,698	69
French-speaking African countries (15 countries)2/					
- Professional categories	467	841	374	485	77
- Middle level categories	576	967	391	620	63
All the 33 countries surveyed					
- Professional categories	1,078	2,142	1,064	1,631	65
- Middle level categories	1,856	3,422	1,566	2,318	68

18. By way of simplifying the calculations, a hypothesis was established according to which the estimated needs for the 1978-1982 period (five years) represented half the estimated needs for the period 1978-1987 (ten years).

1/ Botswana, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Nigeria, Uganda, Seychelles, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania and Zambia.

2/ Benin, Burundi, Cameroon, Central African Republic, Congo, Ivory Coast, Gabon, Madagascar, Mali, Mauritania, Niger, Rwanda, Senegal, Togo and Zaire.

19. It is evident from Table I that the increase in the number of statistical staff for the 33 countries surveyed, during the 1977-1982 period, represent 65 per cent of their needs in professional statisticians and 68 per cent their needs in middle level statisticians. At the 77 per cent and 69 per cent increase respectively, the needs for professional statistical staff seem to be better covered in the French-speaking countries than in the English-speaking countries. However, the opposite is the case with regard to the needs for middle level staff with 63% and 69%, respectively. It may be concluded that this increase in the number of staff was due especially to the recruitment of new qualified staff by STPA centres. However, the figure includes also statisticians trained by other centres, national or foreign, and recruited by national statistics departments, other State departments or the private sector. The table also shows, however, in a smaller proportion, staff who had no training in statistics but were recruited by statistics departments of the region.

20. Table 2 shows the proportion of statisticians working in the different sectors for the 33 countries surveyed, according to 1977 and 1982 surveys:

Table 2: Distribution of statisticians among the different sectors in 1977 and 1982

	in%					
	1977 Survey			1982 Survey		
	NSD[1/]	Other State Depts	Private & other sectors	NSD[1/]	Other State Depts	Private & other sectors
English-speaking African countries (18 countries)						
- Professional categories	62	22	16	44	26	30
- Middle level categories	67	19	14	57	27	16
French-speaking African countries (15 countries)						
- Professional categories	44	23	33	51	28	21
- Middle level categories	56	26	18	54	33	13
All the 33 countries						
- Professional categories	54	22	24	47	27	26
- Middle level categories	64	21	15	56	29	15

1/ NSD: National Statistics Departments.

21. The main shortcomings of Tables 1 and 2 rest probably in the lack of information regarding statisticians working in other State departments or especially in the private sector. Several figures on these two sectors are estimates prepared from inadequate information collected in the countries visited or from other sources.

22. However, the following conclusions may be drawn from Table 2 as far as the 1977-1982 period is concerned:

(i) A large number of professional statisticians have apparently joined other State departments or especially the private sector in the English-speaking African countries, to the detriment of the national statistics departments;

(ii) The situation of the national statistics departments and other State departments as far as the professional level statistical staff are concerned seems to be better strengthened in the French-speaking African countries, but this time, to the detriment of the private sectors;

(iii) A large number of the middle level category statisticians work in the other State departments to the detriment especially of the national statistics departments in the case of the English-speaking countries and of the private sector in the case of the French-speaking countries.

23. Attempts will be made to evaluate the performance of the STPA centres to find out if the conclusions drawn from Table 1 are valid.

24. The secretariat has received from the centres participating in the STPA, figures on their outputs between 1978 and 1984, a period of 7 years, for each level of training. Besides, Tables 2 and 3 attached to the original STPA document (E/CN.14/ECO/132) relating to the requirements and offers, give the figures according to each country and centre for the 1978-87 period. Supposing that the estimated requirements are evenly distributed each year, the requirements for the 1978-84 period represent 7/10 of those estimated for 1978-87 period. The comparison of the two figures concerning the outputs on the one hand and the requirements and the offers on the other, for the 1978-84 period is contained in Table 3.

Table 3: Comparison of needs to be met and outputs of STPA centres - 1978-84

Language groups and categories of statistical staff	Needs to be met by STPA centres	Outputs of STPA centres, 1978-84	Percentage of needs met
English-speaking centres			
- Professional categories	1,431	951	66
- Middle level categories	930	780	83
French-speaking centres			
- Professional categories	1,505	1,843	122
- Professional categories (excluding INSEA Rabat)	966	930	96
- Middle level categories	1,232	813	66
All STPA centres			
- Professional categories	2,936	2,794	95
- Professional categories (excluding INSEA Rabat)	2,397	1,881	78
- Middle level categories	2,170	1,593	73

25. In order to better interpret the figures on Table 3, it is necessary to explain that the number of statisticians of middle level categories to be trained by the centres participating in the STPA is only 2,170 because 2,369 statisticians of this level are supposed to have been trained by other centres, particularly national centres or as part of the implementation of a special project for the Portuguese-speaking African countries. Besides, the Rabat centre in Morocco, whose case has been treated separately, has alone more than half the number of professional statisticians trained by French-speaking centres during the 1978-84 period.

26. It follows from Table 3 that the percentage of the needs satisfied in the case of professional statisticians is more for the STPA French-speaking centres than for the STPA English-speaking centres, with 96 per cent for the former (excluding the Rabat centre in Morocco) as against 66 per cent only for the latter. This confirms the observation made in Table 1. The opposite is the case of middle level statisticians when one comes to note that the percentage of the needs satisfied in the French-speaking countries is 66 per cent and 83 per cent in the English-speaking countries.

27. Table 4 also makes it possible to compare, by using another method, the performance of the STPA centres with the original objectives for the period 1978-84. The figures will be given showing increases, expressed in percentage, in relation to the estimates obtained for the period under review while keeping the rate of training staff in 1978 when the STPA was established.

Table 4: Comparison of increase expressed in percentages, in the outputs and the requirements in relation to the initial situation, for the period 1978-84

STPA centres and categories of statistical staff	Increase in the needs in relation to the initial situation, expressed in percentage	Increase in the outputs in relation to the initial situation, expressed in percentage
STPA English-speaking centres		
- Professional categories	69	12
- Middle level categories	72	43
STPA French-speaking centres		
- Professional categories	37	68
- Professional categories excluding the Rabat centre	22	18
- Middle level categories	44	-5
All STPA centres		
- Professional categories	51	44
- Professional categories excluding the Rabat centre	46	15
- Middle level categories	55	14

28. The figures contained in Table 4 confirm the fact that the STPA English-speaking centres are still quite far from attaining the objectives set for the training of the professional statisticians. It is true that, as indicated earlier, the greater part of the expected increase of the numbers concern the training of professional statistical staff in the English-speaking countries. Similarly, the figures relating to the STPA French-speaking centres show that the contract has not been fulfilled with regard to the training of middle level staff for the French-speaking countries. Nevertheless, it should be stated that originally, it was planned to open a middle level training section at the Kigali IAMSEA. However, this section was opened only in October 1983 as a national training branch and not as a regional training unit. By removing this centre from the table relating to the requirements and offers for the middle level staff, the increase of the needs to be satisfied in this area by the STPA French-speaking centres in relation to the initial situation would be 13 per cent instead of 44 per cent.

29. The conclusions of the Joint EEC/ACP/ECA study referred to earlier, showed that the Africa region's needs in statistical staff have gone up significantly in relation to the estimates prepared at the inception of STPA. This increase concerns particularly professional staff for English-speaking countries and the middle level category for both groups of countries. It is therefore necessary to take appropriate steps within the framework of STPA to satisfy the growing needs of the region in all categories of statistical staff.

IV. JUSTIFICATIONS OF THE RESULTS ACHIEVED AND FOLLOW-UP ACTION

30. Several problems account for the relatively unsatisfactory results achieved by the STPA centres.

31. First, it should be pointed out that fellowships continue to constitute one of the major obstacles to the development of the programme. This issue has been discussed many times by the meeting of Directors of the Centres participating in the STPA and the Joint Conference of African Planners, Statisticians and Demographers. Negotiations were undertaken with the Commission of European Communities on the financing of these fellowships from the regional funds of the European Development Fund (EDF) pursuant to a Resolution of the ECA Conference of Ministers. After a glimpse of hope at the beginning, negotiations on this request fell through. Indeed, the E.D.F., like the other bilateral and multilateral donor agencies, confirmed that fellowships for the STPA centres should form part of each country's programmes. The general feeling of the donors is that there are sufficient fellowships in these programmes but that the countries do not utilise them fully.

32. The recommendation of the recent session of the Conference of African Planners, Statisticians and Demographers held in Addis Ababa in March 1984, constituted a reasonable and a realistic basis for solving this problem. In fact, the Conference was of the view that African Governments should ensure that an adequate number of fellowships were earmarked for statistical training, either from national resources or from the funds provided by bilateral or multilateral donors. It also requested the donor agencies to facilitate and accelerate as much as possible the process of granting fellowships. The Conference further recommended that Directors of Statistical training centres communicate early to the countries, the list of the candidates admitted into their centres to enable the countries start in time the formalities for applying for fellowships from the funding agencies.

33. Another problem relates to the limited number of places offered in many STPA centres. In fact, some of these centres have operated for several years in temporary premises. The problem is happily being resolved with the recent completion of the new premises for IAMSEA in Kigali and the new buildings being built at ENSEA in Abidjan. It is also expected that the construction of the new premises at the EASTC in Dar-es-Salaam will start as early as possible, for this project has been in the pipeline for several years already. All the parties involved should accelerate the process for the realisation of this project. It is hoped that other STPA centres will also be planning to make extensions to their present premises or to construct new ones. The INSEA in Rabat has set an example in this area, for the suitability of the present premises has enabled the centre to increase its output beyond all expectations.

34. Besides, it is noted that some countries find it difficult to have successful candidates in the competitive examinations or candidates who have passed after training. Some STPA centres have, in collaboration with national statistics departments, already started organising correspondence courses to prepare candidates for competitive examinations or future studies, particularly in mathematics. These efforts should be pursued and intensified to enable all countries of the region have an adequate number of statistical staff in all the required categories.

35. The relatively unsatisfactory results achieved by the English-speaking STPA centres in the field of training of professional staff is explained by the fact that several universities run courses in statistics either as a single subject or as part of a more general course. Apart from the six STPA centres concerned, there are statistics departments in the universities of other five countries and the establishment of such a department is also envisaged in the near future in other three countries. Owing to the existence of these national structures, the STPA English-speaking centres have in general trained a lot more of the nationals of the countries where these are established than the other countries. It is therefore necessary to take into consideration, for the future, these national structures for meeting the professional statistical staff needs of the English-speaking African countries. Actions should also be taken to make the courses given in these national centres more practically oriented.

36. The needs for the training of the professional statistical staff in the STPA French-speaking centres have not been met, especially the training of statistician economists (ISE), because the courses for this category of staff did not start in Africa during the period under review. However, it should be pointed that the Abidjan centre proposes establishing a section for this type of training as soon as the present construction of its permanent premises is completed. The Yaounde centre also intends opening a section for this type of training when conditions permit. These projects should be encouraged within the framework of the STPA. At the moment, the CESD of Paris intends assisting the two centres in Abidjan and Yaounde in the technical preparation of what is commonly known as "the transfer of CESD to Africa". In this regard, financial support is being expected within the framework of the assistance project of the European Economic Community (EEC) to STPA.

37. Given the importance of the demand for the middle level statisticians, several countries have already established national facilities for the training of this category of staff. Eleven English-speaking countries have already started such courses and three others are planning to follow suit. Apart from the STPA centres, the establishment of such national facilities has only quite recently begun in the French-speaking countries. In this connection, mention should be made of Benin, Congo, Niger, Central African Republic and Rwanda. Similar projects are also being drawn up in Gabon and Madagascar.

38. Ultimately, most of the STPA centres offering middle level training courses will essentially be utilised by candidates from countries where these centres are located. Admission of foreign students will be limited to nationals of small countries in which running of corresponding local training courses are not justifiable. However, the EASTC, Dar-es-Salaam which is a regional centre should continue to offer middle level statistical staff training to the main countries utilising it.

39. With the establishment of national facilities for the training of middle level category statistical staff, it would be necessary to harmonise the programme and the recruitment conditions to some extent. The assistance of the STPA centres will be decisive in this regard, especially for the training at the "Adjoint technique" or diploma level.

40. As regards the Portuguese-speaking African countries, it should be pointed out that a project document has recently been prepared by Mozambique with the help of ECA, for the establishment of a unit for the training of the middle level categories of statistical staff, attached to the National Department of Statistics. This project document will be submitted to the donor agencies interested in financing it. A consultant has also been recruited for 6 months within the framework of STPA to assist the launching of the in-service statistical training programme in Guinea Bissau and Sao Tome and Principe. With regard to the project for special assistance to Portuguese-speaking African countries, it should be recalled that the third session of the Joint Conference of African Planners, Statisticians and Demographers noted with satisfaction the new realistic approach given to this project by placing emphasis on training at national level. It was suggested that STPA's action be pursued in that manner.

V. EVALUATION OF THE ACTIVITIES UNDERTAKEN WITHIN THE FRAMEWORK OF STPA

41. To facilitate this evaluation, reference will be made to the work programme proposed for STPA at the time it was created which is also reproduced in section II above dealing with the objectives.

(i) Dissemination of information on training activities

42. This question will be discussed in more detail under the agenda item 10 of the fourth meeting of the Directors of Centres participating in the STPA. However, it can be said that the main channels for disseminating information on statistical training activities within the framework of the STPA are:

- "STPA News": The STPA News is published twice a year. It gives account of the STPA activities in general. So far, nine issues have come out. The frequency of the publication of the STPA News has been maintained in recent years after some initial material difficulties had been overcome.

- Directory of STPA and associate centres: This publication which comes out every two years, provides detailed information on the activities of STPA and associate centres. In fact, the associate centres were only included in the directory beginning with the 1985 edition, upon request from the last meeting of the Directors of the Centres participating in the STPA. So far, four editions of the Directory have been published and distributed.

- Directory of non-STPA centres: This document gives information on the activities of national statistical training centres in Africa which do not participate in the STPA. It is felt that these centres, although non-members of the STPA, make vital contributions to the training of statistical staff needed by Africa. It should be explained that membership of the STPA implies *inter alia* that a centre be regional, *de jure* or *de facto*, that is to say, offering services to other countries of the region. In that connection, the centre may be granted assistance from the regional funds of donor agencies. On the other hand, purely national centres can only be given assistance bilaterally. This was the first time the publication of a directory of non-STPA centres had been undertaken. This directory should henceforth form part of the STPA regular publications.

- Six-monthly progress report on STPA activities: This report is prepared in June and December each year at the request of UNDP which finances the regional component of the STPA based in ECA. This document is distributed to all countries of the region for comments and suggestions.

43. Efforts should be made to keep up these publications. To this end, the secretariat should take every necessary step to overcome the problems of translation and printing of these publications. Besides, STPA and associate centres as well as the non-STPA centres should send systematically to the secretariat information concerning their activities and react diligently to the requests for specific information made to them.

(ii) Maintenance of equivalence of curricula and qualifications, review and reorientation of course programmes

44. The maintenance of equivalence of curricula and qualifications is not only useful, but also necessary. In fact, candidates holding qualifications from a centre may be made to pursue courses in another centre. Besides maintenance and some harmonisation of the programmes and recruitment conditions, facilitates the recognition of degrees awarded by the different centres by civil services of the countries concerned.

45. The STPA French-speaking centres have for their part set up, several years ago, common competitive examinations for admission to courses in statistics with the help of CESD. There are also bases for effective co-ordination at the level of the middle level category of staff for which common competitive examinations are now being organised in many French-speaking countries of the region either by ISPEA of Yaounde or ENSEA of Abidjan.

46. Such common competitive examinations do not exist in the English-speaking STPA centres. Conditions for admission and the duration of courses are at times different. For instance, for the B.Sc. programme, the Department of Statistics of the University of Ibadan insists that candidates possess passes in mathematics and at least in one other discipline (on the approved list of the University) at G.C.E. advanced level or be holders of a professional diploma in statistics and fulfil the minimum entry requirement for preliminary courses at the University of Ibadan. The duration of the course is 3 years. For the same programme, the Department of Statistics of the National University of Lesotho insists on Cambridge Overseas School Certificate (COSC) or GCE ordinary level under certain conditions. The duration of the courses is four years. Despite these differences in the conditions of admission and duration of courses, steps should be taken to ensure that diplomas issued are of almost comparable level. This problem can be partly resolved through the harmonisation of teaching programmes. It was also proposed with regard to the middle level staff that an equivalence be established between the diplomas delivered by STPA centres and the training given and certificates awarded by the Institute of Statisticians, United Kingdom.

47. As for the review and re-orientation of the course programmes, it should be pointed out that the following guide syllabuses have been drawn up by ECA within the framework of STPA activities:

- Separate guide syllabuses for the training of the middle level statistical staff for the French-speaking centres and the English-speaking centres (published in 1982);

- Guide syllabus for the in-service statistical training (preliminary level, first and second stages), 1983;

- Guide syllabus for the in-service statistical training for Portuguese-speaking African countries (Portuguese language), 1984.

48. Besides, separate guide syllabuses for professional statistical training are being drawn up for the French-speaking centres and the English-speaking centres. The first draft has already been sent to all National Statistics Departments in the region and all STPA centres for comments and suggestions. It was also planned that the two groups of consultants in charge of preparing these guide syllabuses meet in August, 1985 to try to bridge the gap between the French and English training systems and to review these documents in the light of comments received.

49. During the preparation of these different guide syllabuses, special emphasis was laid on the practical re-orientation of courses. Besides, applied statistics occupied an important place in these syllabuses. It is necessary for the future to review periodically these guide syllabuses in line with the new developments in statistical techniques and the needs of the countries of the region.

(iii) Development of high level training, including post-graduate training and specialisation

50. Two STPA French-speaking centres including CESD of Paris and INSEA of Rabat have so far provided training for statistician-economists (ISE). Since the beginning of the 1984/85 academic year, the INPS of Algiers has opened a "cycle des ingénieurs d'Etat" which corresponds to ISE level and a "cycle des magisters (post-graduate course). Options have been given to the final year students. In the case of CESD, each student opts for a certain number of subjects selected from the following: Mathematics or theory of statistics, economics, practical statistics and business economics. In the case of Rabat centre, the students select either statistics or economics. A third option which concerns demography, is also being considered. There is provision for specialisation in the case of each options (economic analysis, planning, sampling, etc...). The Algiers centre has two branches for the "Cycle des ingénieurs d'Etat" (statistics and planning) and two branches also for the "Cycle des magisters" planning and quantitative techniques. As indicated earlier, there are plans for the opening of a section for the ISE training at the Abidjan and Yaounde centres. An STPA centre, IFORD of Yaounde, provides post-graduate specialised training in demography.

51. Only three of the STPA English-speaking centres currently organise post-graduate university training. They are the Department of Statistics, University of Ghana (Legon), the Department of Statistics, University of Ibadan, and RIPS which, like IFORD, provides specialised training in demography. It appears that the Legon and Ibadan centres do not offer courses for specialisation leading to the M.Sc. and post-graduate diploma. At the Legon centre, the final year students have to select two courses with the approval of the centre and take one compulsory course on the theory of probability in addition to a practical course. At the Ibadan centre, an optional course which has nothing to do with specialisation enables the student to have the number of units required for obtaining the degree. It is worth

mentioning in this connection that ISAE (Kampala) intends opening as early as possible, cycles of training leading to post-graduate diploma (Dip.Stat) and M.Stat or Masters in Statistics. Provisions have been made for optional specialisation courses in the field of national accounting, demography and social statistics, economic statistics, agricultural statistics, sampling techniques and computer science. Besides, courses for operational research and econometry constitute additional options for the M.Stat programme.

52. Six STPA French-speaking centres offer courses leading to the "Diplome d'ingénieur des travaux statistiques" (or "ingénieurs d'application de la statistique"). These centres are the College of Statistics (Dakar), ENSEA (Abidjan), IAMSEA (Kigali), INPS (Algiers), INSEA (Rabat) and ISPEA (Yaounde). Most of these centres also organise optional courses for the final year students. At the ISPEA, the students have the choice between statistics and applied economics. Until the introduction of new reforms, the INPS used to have two options (statistics and economic analysis) for the"cycle des ingénieurs d'application de la statistique". This cycle was replaced by the cycle for the training of "techencieans superieurs"(senior technical statisticians) but the secretariat has no information about the options existing at this level. The final year students at the INSEA participated in the study and research groups of their choice. It should further be pointed out that this centre also offers a four-year training course for the "ingénieurs analystes informaticiens" and a two-year course for the "adjoints techniques programmeurs". ENSEA has 4 options: Computer Science, Management, Applied Statistics and Demography. It appears that there are no optional courses at IAMSEA and at the College of Statistics of Dakar although the latter states that the third year is solely a year of specialisation and refresher courses.

53. Five STPA English-speaking centres provide training leading to the first degree in Statistics (B.A., B.Stat and B.Sc.). These are the ISAE, Kampala, the Departments of Statistics of the University of Ghana, the University of Ibadan, the University College of Botswana and the National University of Lesotho (NUL). Most of these centres practise the single or double major system of specialisation in Statistics. In the case of the University of Ghana, Legon, to qualify for a double major specialisation, the students have to select, apart from statistics, one of the following subjects: Economics, Mathematical Statistics, Computer Science or Mathematics. At the Lesotho centre (NUL), the most common areas of specialisation are Economics, Mathematics, Human Geography or Biology.

54. It emerges from the short review given above, that apart from IFORD and RIPS which offer specialisation courses in demography, no other STPA centre provides courses for specialisation in a specific area of applied statistics like national accounting, agricultural statistics, sample surveys and electronic data processing. Such specialisation courses are, as of now, only given by centres outside the African region, particularly STPA associate centres such as the Munich Centre and the ISPC, Washington.

55. Although the level of ITS training (or IAS or B.Sc or B.A. or B.Stat) cover general courses in statistics and related areas, it seems useful that all STPA centres offering courses at this level should adopt the system of optional courses so as to stimulate the interest of the students for future specialisation and to orient them immediately to areas where they are likely to work after obtaining their degrees. An important place should be given to data processing. application and analysis. Furthermore, the teaching of applied statistics should be intensified.

56. With regard to ISE level of training (post-graduate diploma or M.Sc.), the need to organise optional courses at this level is recognised especially as regards STPA English-speaking centres. Special emphasis should be placed on both the teaching of statistical methods (sampling, statistical computer science, etc...) and those methods which will help in the acquisition of specialised knowledge in applied statistics.

57. As was mentioned above, the draft guide syllabus for professional statistical training to be submitted to the fourth meeting of the Directors of STPA centres emphasize courses in Applied Statistics. It would be necessary to widen the scope of some of these courses further, to enable the STPA centres which so wish, to offer specialisation courses.

(iv) Assistance to countries wishing to establish in-service training programmes at middle level

58. As was said earlier, several countries of the region have already created national facilities for the training of middle level statistical staff. The system adopted in organising this type of training varies from country to country. In most of the French-speaking countries, the training is given on full time basis just like at the STPA centres. In the other countries, especially English-speaking countries, the courses are run in the evening or between the working hours and the students' free time. The assistance to be given within the framework of the STPA concerns both the part-time and the full-time training.

59. Missions have been sent to several countries of the region where these facilities already exist to gather up-to-date information on the organisation and the running of the courses, discuss with the authorities concerned the difficulties encountered and suggest solutions. Programmes of the teaching of these national facilities were also subjects of wide-range exchange of views, especially in the light of the guide syllabuses for middle level and in-service statistical training drawn up by ECA.

60. Missions were also sent to some countries where such middle level statistical training national units do not as yet exist. It was noted that in most cases, plans were already in progress for the establishment of these units but certain administrative and technical arrangements were to be finalised and concrete proposals made before they would be implemented. The missions in question were therefore organised at the appropriate time to assist the interested countries in these tasks.

61. Other missions will be sent to the countries not yet visited. Follow-up missions will also be sent to other countries, if necessary.

62. The organisation of this type of training requires the participation of one or more national heads depending on the scope of the project. However, experts have been provided in some cases through external assistance for a limited period, to help the national heads in launching their training programmes. This is the case of the Central African Republic and Rwanda whose projects are benefiting from the assistance of experts from EEC or FAC. In Niger, the expert was recruited through French technical co-operation assistance programme but

to a good lecturer, or encouraging staff exchange through the twinning of a Third World University with a university in a developed country. Other participants, on the other hand, emphasized that lecturers should possess solid theoretical knowledge which would enable them to adapt to changes in statistical technique. Furthermore, they emphasized the need for the lecturers to contribute to the development of statistics research in Africa. In conclusion, the meeting recognised that there was no single method for training the trainers. It was, however, agreed that the training of trainers demanded much more than just importing of technical knowledge and included such questions as how to teach. Besides, conditions prevailing in the individual centres should be taken into consideration, while bearing in mind the aspirations and interests of the individuals to be trained. In the light of these discussions, certain decisions were taken within the framework of the regional component of the STPA financed by UNDP, namely:

- Fellowships may be awarded for a maximum period of two years;
- Lecturers at middle level statistical training centres may apply for fellowships to study courses leading to a degree no higher than Masters;
- One-year specialisation courses are to be encouraged;
- All suggestions relating to the method of training the lecturers, which would take into account the conditions and specifications of each centres, would be examined with interest.

74. In order to ensure the effective utilisation of the trained teaching staff, it seems necessary to reiterate the following suggestions put forward and accepted by the third meeting of Directors of STPA centres:

- Candidates for fellowships to train as lecturers should be sponsored by the centres concerned, which will at the same time undertake to use their services on a full-time basis in the centres in question.
- Candidates holding fellowships should sign a bond to serve the sponsoring centres for at least five years after completion of their training. A signed copy of this bond should be sent to the agency financing the fellowship.

(vii) Other activities

75. This section deals briefly with matters relating to the teaching of statistics in secondary schools, critical analysis, and periodic evaluation of the STPA activities, as well as co-ordination of the activities of the Programme.

76. With regard to the introduction of statistics as a subject in secondary schools, it should be pointed out that nothing has so far been done within the framework of the STPA. This situation might have been due to the fact that it is a long-term project which calls, among other things, for the preliminary preparation of text-books devised for secondary schools, as well as the adoption of a curricula reform by the educational authorities of each country. Now, all reforms are considered in most countries of the region and, even, in other countries first and foremost from the angle of their financial implications. Nevertheless, it will no doubt be useful to explore, with UNESCO support, the possibilities existing in this area.

77. On the question of the critical analysis and evaluation of the STPA, it should be emphasized that the biennal meeting of Directors of centres participating in the programme, and the Joint Conference of African Planners, Statisticians and Demographers, constantly include on the agenda of each of their meeting, an item relating to the discussions of problems pertaining to the development of the STPA. It should also be pointed out that informal or formal tripartite meetings of the STPA are held periodically with UNDP. Besides, the joint EEC/ACP/ECA study on the statistical training needs in Africa, also contributes to the critical analysis and evaluation of the STPA. Finally, this document, despite its shortcomings, is intended to serve as an evaluation of the STPA and to map out the directives for future actions.

78. With regard to the co-ordination of the activities of the programme, all the parties concerned should be commended for their willingness and co-operation: African Governments, STPA and associate centres, other training centres in Africa, bilateral and multilateral aid agencies, as well as national and international institutions. Admittedly, problems do exist, but efforts are made each day to solve them. One of the recent developments relating to the co-ordination of the activities of the programme was the implementation of an EEC assistance project for STPA, financed under the regional comment of the European Development Fund (EDF). This question will be discussed in more detail under agenda item 9(a) of the meeting of the Directors of STPA centres. Finally, as has already been indicated, the meeting of Directors has played a major role in the co-ordination of STPA activities. The fact that it is held regularly, has also been a contributory factor in this role.

VI. CONCLUSION AND FUTURE WORK PROGRAMME

79. In conclusion, it should be stated that, even if the objectives of the STPA have not been fully attained during the first seven years of the implementation of the programme, notable efforts have been made in this direction. Admittedly, problems of fellowships for courses at centres, limited accommodation facilities at the centres, difficulties faced by certain African countries in securing admission to centres for candidates, etc... still exist. Nevertheless, it is hoped that current or future measures within the STPA framework would make it possible to resolve these problems.

80. There is a need to integrate National Institutions which are training professional statisticians into the network of training facilities intended to satisfy African regional needs in statistical staff of this level, within the framework of STPA, especially in the English-speaking countries. Efforts at re-orienting the centres' teaching curricula so as to make them more practical will no doubt come up against difficulties. Nevertheless, this should not make us lose hope in our efforts in this direction.

81. The need for the two STPA French-speaking centres, ENSEA, Abidjan, and ISPEA, Yaounde, to open a section for the ISE level training during the coming years is more and more felt. It is hoped that this project can be realised within a maximum of five years, taking, of course, into account the fact that it is a difficult operation and that it should be carefully prepared so as to maintain the recognised level of this training. It is also proposed that one or two English-speaking STPA centres, ISAE, Kampala, and/or the Ibadan centre should conduct specialised post-graduate training courses. The creation and expansion of national units for the

financed by the World Bank. The project in Zambia was initially supported by UNDP which had an expert but that assistance was phased out. Similarly, in Zimbabwe, an expert was supplied by the Overseas Development Administration (ODA) but he had also left. It should be recalled that a consultant had been recruited by ECA within the framework of special assistance to Portuguese-speaking African countries to assist in launching in-service statistical training programmes in Sao Tome & Principe and Guinea Bissau.

(v) Organisation of short-term courses and seminars for practicing statisticians

63. The list of short-term statistical courses and seminars organised during the 1983-85 period, and those planned for the 1986/87 period by STPA and associate centres as well as other training institutions will be submitted under agenda item 7(b) of the Fourth Meeting of Directors of Centres participating in the Programme for consideration.

64. Indeed, taking the period from 1978 when the STPA was established, to the present date, it will be observed that only a small number of short-term seminars and courses have so far been organised by STPA centres. However, it should be noted that these centres have shown growing interest in this area of activities, in recent years. Eight STPA centres had planned to organise such short-term courses during the 1983-85 period. They were, for the French-speaking centres: the College of Statistics (Dakar), CESD (Paris) IFORD (Yaounde) and INSEA (Rabat); and for the English-speaking centres: EASTC (Dar-es-Salaam), ISAE (Kampala), RIPS (Legon) and the Statistics Department of the National University of Lesotho. Some centres, such as ENSEA (Abidjan) and ISPEA (Yaounde) have indicated that they had hosted similar short-term seminars and courses organised by other bodies. Five STPA centres have apparently not undertaken any activity in this field during the period under consideration.

65. The associate STPA centres have been very active in organising seminars, courses and short-term training sessions. It should be pointed out for example, that between 1978 and 1984, ISPC (Washington) had trained 281 candidates from 30 African countries, through seminars and training workshops and 272 candidates from the same countries, who attended annual training courses offered by the Institute in various fields of applied statistics. Similarly, the Munich Centre for Advanced Training in Applied Statistics had, during its 4 months courses in various applied statistics subjects, trained about 500 candidates, mainly from African countries, the Caribbean and Pacific States (ACP) associated with the European Economic Community (EEC) through the Lome Convention. More than 70 per cent of these candidates came from Africa. Since 1980, the centre has also been organising 4-5 week long courses in countries covered, especially in Africa. Detailed information on the activities of all the centres concerned will be found in the Directory of STPA and associate centres.

66. Other centres situated outside the region have also contributed to the organisation of refresher courses for practicing African statisticians. The following may be cited as example: the U.S. Department of Labour, Washington, the University of Strathclyde Fraser of Allander Institute, Glasgow, United Kingdom, and the Tashkent Agricultural Institute, Tashkent, USSR.

67. In conclusion, it should be recommended that STPA centres should endeavour to organise more internal seminars and training workshops in various fields of applied statistics. An appeal is being made to donor agencies to assist STPA centres undertake these activities.

68. The contributions from associate centres in this field are highly appreciated. It is hoped that these contributions will be maintained and further increased. Besides, associate centres should organise, where possible, some courses in Africa itself, with a view to reaching a wider audience and adapting statistical technique to regional realities.

69. In addition to refresher courses for working statisticians, seminars should also be organised for the users of statistics (Ministries of Planning, Economy, Finance, Central Banks, etc...). Furthermore, exchange of ideas between producers and users of statistics should be encouraged. Finally, in future, emphasis should be placed on certain fields, such as statistical data processing, data utilisation and analysis, the food accounting matrix, agricultural statistics, etc.. which are the current subjects of concern to African countries.

(vi) Training of trainers

70. In order to cope with the increased number of students to be trained and maintain high teaching standards, STPA centres must not only augment the number of their teaching staff but also improve their quality.

71. In 1978, when the STPA was established, the total number of the teaching staff of the twelve centres which were its original members, was estimated at 97 including 44 expatriate. These centres thought that, for the objectives of the STPA to be attained, it was necessary to bring the number of their teaching staff to be over 80 per cent or to a total of 180 lecturers, including 99 expatriates. According to the provisional estimates, the total number of lecturers at post in the 12 centres concerned would be 154 including 37 expatriates.

72. It should be pointed out that several fellowships had been offered for the training of teaching staff for the STPA centres. The fellowships were provided either by the centres themselves, their host countries, bilateral or multilateral donor agencies, or national and bilateral institutions. Unfortunately, the secretariat has no information on the total number of fellowships offered. It may, however, be mentioned that 16 fellowships for courses ranging from 3 months to 2 years, were awarded to lecturers of these centres, within the framework of the regional component of the STPA which is financed by UNDP. Furthermore, 2 fellowships for 3-year courses were exceptionally awarded. It was noted that some of the lecturers failed to return to their centres of origin on completion of their training and it appears no steps had been taken beforehand to prevent such a situation. However, it should be pointed out that all those holding fellowships under the regional component of the STPA financed by UNDP had returned to their centres of origin on completion of their studies.

73. The question on how to train lecturers was exhaustively discussed at the third meeting of Directors of STPA centres. Some participants were of the opinion that long periods of studies leading to a doctorate degree were unnecessary and that lecturers should rather be encouraged to acquire practical experiences through attachments to national statistics offices, posting to an institution as assistant

training of the middle level statistical staff, including in-service training, should be given higher priority than before. It would be necessary to maintain the ties existing between these national units and national statistics departments and the STPA centres offering courses for the staff at this level.

82. Particular attention should be given to the training of middle level statistical staff needed by the Portuguese-speaking African countries, within the framework of the project for special assistance to these countries. With regard to the training of professional statistical staff, STPA centres can make contributions in this area by drawing from the experience of the College of Statistics of Dakar which had successfully trained nationals of Cape Verde and has also recently admitted candidates from Guinea Bissau for ITS courses.

83. Additional resources should be placed at the disposal of the STPA centres to enable them achieve their objectives, especially by providing them with visiting professors, granting of fellowships for the training of trainers, supplying them with equipment (micro-computers, calculators, reproduction equipment, etc...) and support for the organisation of short-term seminars and courses.

84. All the other activities earmarked as part of the implementation of the STPA, particularly those concerning the co-operative development of teaching programmes, specialisation, dissemination of information on statistical training activities and co-ordination of the activities of the programme, should be sustained and strengthened.

85. In the light of the conclusions on the present evaluation, the following work programme, presented in brief, is being proposed to guide future actions for the development of the overall STPA programme.

A. Operational support for all STPA centres to enable them contribute effectively to the attainment of the programme's objectives, particularly:

(i) Assistance for the training of trainers. This assistance should take into account the various prevailing situations according to the system within which the centre is operating, the juridical nature of the centre, the status of the teaching staff and the level of the courses offered.

(ii) Supply of consultants on a short-term basis to give lectures in certain specialised areas.

(iii) Supply, according to the needs, of full-time lecturers pending the return of the instructors from training.

(iv) Provision of equipment, particularly micro-computers, calculators, reproduction equipment, etc...

(v) Support, according to the needs, for the expansion or construction of premises.

(vi) Support for the organisation of seminars and working groups in such priority areas of applied statistics as statistical computer science, national accounting, agricultural statistics, sample surveys, data utilization and analysis.

B. Assistance to two French-speaking STPA centres for the opening of a section for the training of statistician-economists and to one or two English-speaking STPA centres for the establishment of post-graduate specialised training courses;

C. Assistance to African countries which may wish to set up or develop national units for the training of middle level statistical staff, including in-service training; special attention will be given to Portuguese-speaking African countries in this area;

D. Support for African national centres for the training of high level statistical staff: this support will be given by aid institutions within the framework of the indicative planning figures for each country; however, it will be necessary to involve these centres in the co-operative development of teaching programmes to ensure a more practical re-orientation of their courses;

E. Co-operative development of teaching programmes, periodic review of the guide syllabuses for professional, middle level and in-service statistical training prepared within the framework of STPA and preparation of teaching materials especially in the field of applied statistics;

F. Dissemination of information on statistical training activities in Africa and outside the region;

G. Periodic evaluation of the activities undertaken within the framework of STPA; to this end, it will be necessary to review yearly the performance of the STPA centres and conduct periodic survey of statistical organisation and staffing in Africa;

H. Co-ordination of the overall activities undertaken within the context of STPA, including initiation of measures to facilitate planning of fellowships for studies in STPA and associate centres and to soften the procedures for awarding fellowships and co-ordination of external assistance, particularly the project for EEC assistance to STPA and the regional component of the programme financed by UNDP.

86. The implementation of the above work programme calls for the active participation of all interested parties, African Governments, STPA and associate centres, national statistical training centres and units, bilateral and multilateral bodies as well as ECA and other interested national and international institutions.

87. The fourth meeting of the Directors of centres participating in STPA is invited to:

1. Make comments and suggestions on the evaluation of the performance of the STPA centres since the programme was established in 1978 to-date;

2. Make comments and suggestions on the evaluation of the activities undertaken within the framework of STPA;

3. Amend and adapt the proposed work programme which will guide the future actions of the STPA as a whole.